

## EAST Search History

| Ref # | Hits  | Search Query  | DBs   | Default Operator | Plurals | Time Stamp          |
|-------|-------|---|---|------------------|---------|---------------------|
| L1    | 1031  | 228/112.1,2.1.ccls.   | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ              | ON      | 2008/10/06<br>14:01 |
| S1    | 38983 | ((friction or frictional\$5) near4 (stir or stirs or stirred or stirring or churn\$5 or agitat\$5) with (bond\$5 or weld\$5 or join or joins or joined or joining or processing)) or ((friction or frictional\$5) near7 (bond\$5 or weld\$5 or join or joins or joined or joining or processing)) | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ              | ON      | 2008/07/15<br>17:59 |
| S2    | 964   | S1 and (plate or sheet or layer or film) same (hollow or empty) same (cylinder or tube or tubes or tubular or tubing or pipe or pipes or piping)  | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ              | ON      | 2008/07/15<br>18:01 |
| S3    | 228   | S2 and (protrusions or fingers or jut or bulge)   | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ              | ON      | 2008/07/15<br>18:05 |
| S4    | 3355  | ((friction or frictional\$5) near4 (stir or stirs or stirred or stirring or churn\$5 or agitat\$5) with (bond\$5 or weld\$5 or join or joins or joined or joining or processing))   | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ              | ON      | 2008/07/15<br>18:20 |
| S5    | 33    | S4 and (plate or sheet or layer or film) same (hollow or empty) same (cylinder or tube or tubes or tubular or tubing or pipe or pipes or piping)  | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ              | ON      | 2008/07/15<br>18:22 |
| S6    | 185   | 148/521.ccls.   | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ              | ON      | 2008/07/16<br>08:59 |
| S7    | 3355  | ((friction or frictional\$5) near4 (stir or stirs or stirred or stirring or churn\$5 or agitat\$5) with (bond\$5 or weld\$5 or join or joins or joined or joining or processing))   | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ              | ON      | 2008/07/16<br>09:05 |

|     |     |  |   |     |    |                     |
|-----|-----|--|---|-----|----|---------------------|
| S8  | 107 | S7 same (plate or sheet or layer or film) same (cylinder or tube or tubes or tubular or tubing or pipe or pipes or piping)   | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/07/16<br>09:05 |
| S9  | 128 | resistance near5 weld\$4 same (friction or frictional) near5 (bond\$5 or weld\$5 or join or joins or joined or joining or processing) same (common or known or obvious)  | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/07/16<br>09:34 |
| S10 | 96  | resistance near5 (bond\$5 or weld\$5 or join or joins or joined or joining or processing) with (friction or frictional) near5 (bond\$5 or weld\$5 or join or joins or joined or joining or processing) same (common or known or obvious) | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/07/16<br>09:34 |
| S11 | 41  | resistance near5 (bond\$5 or weld\$5 or join or joins or joined or joining or processing) with (friction or frictional) near5 (bond\$5 or weld\$5 or join or joins or joined or joining or processing) with (common or known or obvious) | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/07/16<br>09:35 |
| S12 | 11  | "4,949,895"  | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/07/29<br>15:37 |
| S13 | 276 | friction near5 stir near5 weld\$4 with (advantage or advantages or advantageous)   | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/07/29<br>15:40 |
| S14 | 195 | friction near5 stir near5 weld\$4 near5 (advantage or advantages or advantageous)  | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/07/29<br>15:41 |
| S15 | 185 | friction near2 stir near2 weld\$4 near5 (advantage or advantages or advantageous)  | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/07/29<br>15:41 |
| S16 | 43  | friction near2 stir near2 weld\$4 with (advantage or advantages or advantageous) with (wear or strength)   | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/07/29<br>15:46 |

|     |       |   |   |     |    |                     |
|-----|-------|---|---|-----|----|---------------------|
| S17 | 6     | ("4949895"   "5794835"   "6328261").<br>PN.   | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/01<br>13:14 |
| S18 | 39463 | (run near2 (on or off)) same ((friction<br>or frictional\$5) near4 (stir or stirs or<br>stirred or stirring or churn\$5 or agitat<br>\$5) with (bond\$5 or weld\$5 or join or<br>joins or joined or joining or processing))<br>or ((friction or frictional\$5) near7 (bond<br>\$5 or weld\$5 or join or joins or joined<br>or joining or processing))   | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/01<br>13:46 |
| S19 | 39495 | ((friction or frictional\$5) near4 (stir or<br>stirs or stirred or stirring or churn\$5 or<br>agitat\$5) with (bond\$5 or weld\$5 or<br>join or joins or joined or joining or<br>processing)) or ((friction or frictional\$5)<br>near7 (bond\$5 or weld\$5 or join or<br>joins or joined or joining or processing))   | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/01<br>13:51 |
| S20 | 3437  | ((friction or frictional\$5) near4 (stir or<br>stirs or stirred or stirring or churn\$5 or<br>agitat\$5) with (bond\$5 or weld\$5 or<br>join or joins or joined or joining or<br>processing)) or ((friction or frictional\$5)<br>near7 (bond\$5 or weld\$5 or join or<br>joins or joined or joining or processing))<br>same (run near (on or off))  | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/01<br>13:51 |
| S21 | 3429  | ((friction or frictional\$5) near4 (stir or<br>stirs or stirred or stirring or churn\$5 or<br>agitat\$5) with (bond\$5 or weld\$5 or<br>join or joins or joined or joining or<br>processing)) or ((friction or frictional\$5)<br>near7 (bond\$5 or weld\$5 or join or<br>joins or joined or joining or processing))<br>same (run near (on or off)) and (run<br>near (on or off)) same (tab or tabs or<br>finger or fingers or projection or<br>protrusion or extension) | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/01<br>14:06 |
| S22 | 3429  | ((friction or frictional\$5) near4 (stir or<br>stirs or stirred or stirring or churn\$5 or<br>agitat\$5) with (bond\$5 or weld\$5 or<br>join or joins or joined or joining or<br>processing)) or ((friction or frictional\$5)<br>near7 (bond\$5 or weld\$5 or join or<br>joins or joined or joining or processing))<br>same (run near (on or off)) and (run<br>near (on or off)) with (tab or tabs or<br>finger or fingers or projection or<br>protrusion or extension) | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/01<br>14:11 |

|     |      |   |   |     |    |                     |
|-----|------|---|---|-----|----|---------------------|
| S23 | 3429 | ((friction or frictional\$5) near4 (stir or stirs or stirred or stirring or churn\$5 or agitat\$5) with (bond\$5 or weld\$5 or join or joins or joined or joining or processing)) or ((friction or frictional\$5) near7 (bond\$5 or weld\$5 or join or joins or joined or joining or processing)) same (run near (on or off)) and (run near (on or off)) with (tab or tabs or finger or fingers or projection or protrusion or extension) and (cylinder or cylindrical or tube or tubes or tubing or pipes or piping or pipe or tubular)  | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/01<br>14:12 |
| S24 | 3429 | ((friction or frictional\$5) near4 (stir or stirs or stirred or stirring or churn\$5 or agitat\$5) with (bond\$5 or weld\$5 or join or joins or joined or joining or processing)) or ((friction or frictional\$5) near7 (bond\$5 or weld\$5 or join or joins or joined or joining or processing)) same (run near (on or off)) and (run near (on or off)) with (tab or tabs or finger or fingers or projection or protrusion or extension) and (cylinder or cylindrical or tube or tubes or tubing or pipes or piping or pipe or tubular) and (plate or sheet or film or layer)                    | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/01<br>14:13 |
| S25 | 3429 | ((friction or frictional\$5) near4 (stir or stirs or stirred or stirring or churn\$5 or agitat\$5) with (bond\$5 or weld\$5 or join or joins or joined or joining or processing)) or ((friction or frictional\$5) near7 (bond\$5 or weld\$5 or join or joins or joined or joining or processing)) same (run near (on or off)) and (run near (on or off)) with (tab or tabs or finger or fingers or projection or protrusion or extension) and (cylinder or cylindrical or tube or tubes or tubing or pipes or piping or pipe or tubular) and (plate or sheet or film or layer) and "228".clas.    | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/01<br>14:14 |
| S26 | 4    | ((((friction or frictional\$5) near4 (stir or stirs or stirred or stirring or churn\$5 or agitat\$5) with (bond\$5 or weld\$5 or join or joins or joined or joining or processing)) or ((friction or frictional\$5) near7 (bond\$5 or weld\$5 or join or joins or joined or joining or processing))) same (run near (on or off)) and (run near (on or off)) with (tab or tabs or finger or fingers or projection or protrusion or extension) and (cylinder or cylindrical or tube or tubes or tubing or pipes or piping or pipe or tubular) and (plate or sheet or film or layer) and "228".clas. | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/01<br>14:18 |

|     |       |  |   |     |    |                     |
|-----|-------|--|---|-----|----|---------------------|
| S27 | 20    | ((friction or frictional\$5) near4 (stir or stirs or stirred or stirring or churn\$5 or agitat\$5) with (bond\$5 or weld\$5 or join or joins or joined or joining or processing)) or ((friction or frictional\$5) near7 (bond\$5 or weld\$5 or join or joins or joined or joining or processing))) same (run near (on or off)) | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/01<br>14:20 |
| S28 | 93    | ("2219907"   "3228267"   "3550229"   "4103138"   "5460317").PN. OR ("5794835").URPN.   | US-PGPUB;<br>USPAT; USOCR   | ADJ | ON | 2008/10/01<br>14:28 |
| S29 | 82    | S28 and S19  | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/01<br>14:29 |
| S30 | 5     | S29 and (run near (on or off))   | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/01<br>14:38 |
| S31 | 6     | (US-5794835-\$ or US-7270257-\$ or US-7225968-\$ or US-6352193-\$ or US-6325273-\$ or US-5460317-\$).did.  | USPAT   | ADJ | ON | 2008/10/01<br>14:46 |
| S32 | 6     | S31 and (cylinder or cylindrical or tube or tubes or tubing or pipes or piping or pipe or tubular or hollow)   | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/01<br>14:46 |
| S33 | 6     | S31 and (cylinder or cylindrical or tube or tubes or tubing or pipes or piping or pipe or tubular or hollow) and (run near (on or off))  | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/01<br>14:47 |
| S34 | 6     | S31 and (cylinder or cylindrical or tube or tubes or tubing or pipes or piping or pipe or tubular or hollow) and (run near (on or off))  | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/01<br>14:47 |
| S35 | 39495 | ((friction or frictional\$5) near4 (stir or stirs or stirred or stirring or churn\$5 or agitat\$5) with (bond\$5 or weld\$5 or join or joins or joined or joining or processing)) or ((friction or frictional\$5) near7 (bond\$5 or weld\$5 or join or joins or joined or joining or processing)))                             | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/01<br>14:56 |

|     |       |  |   |     |    |                     |
|-----|-------|--|---|-----|----|---------------------|
| S36 | 21909 | S35 and (cylinder or cylindrical or tube or tubes or tubing or pipes or piping or pipe or tubular or hollow)   | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/01<br>14:57 |
| S37 | 10003 | S35 and (cylinder or cylindrical or tube or tubes or tubing or pipes or piping or pipe or tubular or hollow) same (plate or sheet or film or layer)  | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/01<br>14:57 |
| S38 | 9797  | S35 same (cylinder or cylindrical or tube or tubes or tubing or pipes or piping or pipe or tubular or hollow)  | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/01<br>14:58 |
| S39 | 3074  | S35 same (cylinder or cylindrical or tube or tubes or tubing or pipes or piping or pipe or tubular or hollow) same (plate or sheet or film or layer) | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/01<br>14:58 |
| S40 | 404   | S39 and "228".clas.  | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/01<br>14:59 |
| S41 | 2     | S40 and S31  | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/01<br>14:59 |
| S42 | 2494  | S35 same (cylinder or tube or tubes or tubing or pipes or piping or pipe or tubular or hollow) same (plate or sheet or film or layer)                | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/01<br>15:00 |
| S43 | 323   | S42 and "228".clas.  | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/01<br>15:00 |
| S44 | 2     | S43 and tanaka.in.   | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/01<br>15:13 |

|     |      |  |   |     |    |                     |
|-----|------|--|---|-----|----|---------------------|
| S45 | 1    | "10537180"   | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/02<br>10:23 |
| S46 | 0    | ("2004/0041005").URPN.   | USPAT   | ADJ | ON | 2008/10/02<br>10:53 |
| S47 | 0    | ("2006/0081683").URPN.   | USPAT   | ADJ | ON | 2008/10/02<br>10:54 |
| S48 | 6    | "2001088504"   | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/02<br>11:00 |
| S49 | 4    | "10305373"   | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/02<br>11:01 |
| S50 | 398  | seam with (((friction or frictional\$5)<br>near4 (stir or stirs or stirred or stirring<br>or churn\$5 or agitat\$5) with (bond\$5 or<br>weld\$5 or join or joins or joined or<br>joining or processing)) or ((friction or<br>frictional\$5) near7 (bond\$5 or weld\$5<br>or join or joins or joined or joining or<br>processing))) | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/02<br>11:06 |
| S51 | 112  | S50 same (tube or tubes or tubing or<br>tubular or pipe or pipes or piping or<br>cylinder or hollow or roll)   | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/02<br>11:07 |
| S52 | 4    | "03254359"   | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/02<br>11:25 |
| S53 | 4    | "9933594"  | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/02<br>14:52 |
| S54 | 1493 | 228/144,152,173.6,5.7,17.5.ccls.   | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/02<br>15:44 |

|     |     |   |   |     |    |                     |
|-----|-----|---|---|-----|----|---------------------|
| S55 | 551 | S54 and (protrusion or protuberance or extension or projection or thicken\$4 or end near5 (portion or region or area or section)) | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/02<br>15:46 |
| S56 | 7   | ("2148714").URPN.   | USPAT   | ADJ | ON | 2008/10/02<br>16:16 |
| S57 | 4   | (US-20020020164-\$).did. or (US-5794835-\$).did. or (US-2148714-\$).did. or (WO-9933594-\$).did.                                  | US-PGPUB;<br>USPAT;<br>USOCR; EPO                                       | ADJ | ON | 2008/10/06<br>10:55 |
| S58 | 2   | S57 and (thickness or thicknesses)  | US-PGPUB;<br>USPAT;<br>USOCR; FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ | ON | 2008/10/06<br>10:55 |

10/ 6/ 2008 2:09:59 PM

C:\ Documents and Settings\ mmehta\ My Documents\ EAST\ Workspaces\ 10-537180.wsp